3Växel System requirements

Compliance with the system requirements in this document is required to get full functionality, stability and high quality in the 3Växel service. Please also note that older operating systems and hardware are gradually phased out.

3Växel mobile app in smartphone and tablet

The 3Växel app is available for iOS and Android in smartphones and tablets and may be downloaded from Google Play and App Store. For iOS, the two latest, official iOS-versions are supported. For Android, the app supports the three latest official Android-versions on the hardware families Samsung Galaxy, Sony Xperia and Google Pixel. We recommend the latest versions of iOS and Android when new devices are purchased. The life time for older versions are expected to be relatively short.

3Växel Admin and Softphone on computer web

The older **3Växel web (3vaxel.tre.se)** for 3Växel PBX admin and settings supports newer versions of the following web browsers:

- Mozilla Firefox
- Safari
- Google Chrome
- Microsoft Edge

The newer **3Växel Admin (admin.3vaxel.tre.se)** for 3Växel PBX admin and settings supports newer versions of the following web browser:

- Google Chrome

The newer **Softphone and user web (user.3vaxel.tre.se)** supports newer versions of the following web browser:

- Google Chrome

3Växel Softphone in computer – older, client based version

General system requirements for 3Växel Softphone in computer – older client

- The 3Växel Softphone client is downloaded from the 3Växel web (3vaxel.tre.se).
- The Softphone is installed locally on each computer. Thin clients are not supported.
- 30 MB hard disk memory
- For ACD- and attendant view, at least 1024x768 screen resolution is required.
- A minimum Softphone-version is required to be able to login, please see tre.se. Please upgrade if login is rejected because of too low version.

System requirements for 3Växel Softphone in Windows PC

- Later Windows versions
- Later USB headsets with latest firmware version from **Jabra** or from **Poly (Plantronics)** or from **Sennheiser.** Please check manufacturer's web page for supported models and latest firmware.
- Outlook plugin only supports PC and Office 365 or Outlook 2016 and later

System requirements for 3Växel Softphone in Mac (Intel)

- The two latest, official operating system versions of Mac OS.
- Later USB headsets with latest firmware version from **Poly (Plantronics)** or from **Sennheiser.** Please check manufacturer's web page for supported models and latest firmware.

IP-telephony, e g for Softphones and desk phones

Both the computer Softphones (the new web based and the older client based) as well as IP desk phones use IP-telephony (telephony via Internet connection).

General system requirements for 3Växel IP-telephony

- Please reserve at least 100 kbit/ s in both directions per call. (G.711 64 kbit/s + IP overhead)
- The corporate network shall be opened for traffic as specified in table further down in this document.

Internet capacity for 3Växel

Internet capacity shall be reserved for 3Växel services. This is of highest importance if the network is used for IP-telephony (computer softphones and/or IP desk phones). We recommend that other services using high bandwidth, e g video or file transfer are not used over the IP-connection used for 3Växel. Internet connection via a foreign office shall not be used.

The corporate network shall be open for the following traffic:

Source	Destination IP/host	Protocol	Port	Application	Protocol
Customer NW	80.251.192.32/27*	HTTP	80	Web	TCP
Customer NW	80.251.192.32/27*	HTTPS	443	All applications	TCP
Customer NW	80.251.192.32/27*	HTTPS	9443	SNOM IP-telephones	TCP
Customer NW	80.251.192.32/27*	SIP/TLS	5061	All SIP-units	TCP
Customer NW	80.251.192.32/27*	SIP/UDP	5060	All SIP-units	UDP
Customer NW	80.251.192.32/27*	SIP/TCP	5060	All SIP-units	TCP
Customer NW	80.251.192.32/27*	STUN	5060	All SIP-units	UDP
Customer NW	80.251.192.32/27*	RTP/RTCP	49152-65535	All SIP-units	UDP
Customer NW	80.251.192.32/27*	NTP	123	IP-telephones and IP-DECT	UDP

*or 80.251.192.41--59
**or 80.251.192.40—58

For network with strict firewall policies, it may be necessary to open https-traffic (port 443) for the following IP-addresses:
185.39.124.98 & 185.39.124.99 & 185.39.125.98 & 185.39.125.99

Sound files in 3Växel

For both the older 3Växel web (3vaxel.tre.se) and the newer 3Växel Admin (admin.3vaxel.tre.se), it is possible to upload sound files to be used for e g welcome greetings, queue messages, e t c.

Audio file specification at upload (input):
Encoding: PCM (uncompressed)
Sampling frequency: 8 kHz or 16 kHz
Audio file type: .wav

The uploaded file will be converted to PCM 16 bit 16 kHz. It may take up to a minute before the prompt is converted and stored, ready for traffic.

Depending on the capabilities of your browser, recorded prompts will be available for play or audio file download for review purposes.

For editing of sound files, we recommend the Audacity application which may be downloaded from the Internet, free of charge.